

Safety Switches with Separate Actuator, Metal Housing **EUCHNER**

Selection table for safety switches TZ with guard locking and guard lock monitoring

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507 Kelsey Street • Delano, MN 55328
 Phone 763-972-1040 Fax 763-972-1041
 Toll Free 888-920-0939
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Release feature, front	
HE	Mechanical release can be sealed
E	Mechanical release cannot be sealed
HD	Mechanical release for triangular key acc. to DIN 22417 (latching)
ND	Emergency release on the front (pushbutton)
NR	Emergency unlocking on the front (rotary knob can be sealed)
O	Without manual release feature
Release feature, rear	
FS	Escape release on the rear (key button)
FD	Escape release on the rear (pushbutton/button without key)
Version	
SB	Protective plate, tamper protection on the switch head
Enabling switch connection	
BD4	Plug connector 4-pin
RC12	Plug connector 12-pin
Connection	
M	Thread M20 x 1.5 for cable glands
SR6	Plug connector 6-pin + PE
MR8	Plug connector 7-pin + PE
MR10	Plug connector 9-pin + PE
SR11	Plug connector 11-pin + PE
MR12	Plug connector 11-pin + PE
RC18	Plug connector 18-pin + PE
Switching element	
Two contacts	2 x (1 NC ⊖ + 1 NO)
Four contacts	2 x (4 NC ⊖) or 1 x (3 NC ⊖ + 1 NO) + 1 x (2 NC ⊖ + 2 NO)

Manual release								Enabling switch		Connection								Switching element		With version	Page
HE	E	HD	ND	NR	O	FS	FD	SB	BD4	RC12	M	SR6	MR8	MR10	SR11	MR12	RC18	Two contacts	Four contacts		
●											●							●	●	C1925	62
●												●						●		C1638	64
●																●			●	C1924	66
●																	●		●	C1826	63
●															●			●	●	C1933	65
●						●					●							●	●	C1815 / C1828	76
●						●									●		●	●	●	C1815 / C1828	77
●							●				●							●	●	C1684	80
●							●								●			●		C1684	81
●								●			●							●			68
●								●				●			●			●	●	C1677	69
●								●									●		●		70
●							●				●								●	C2082	78
●							●										●		●	C2140	79
	●												●	●				●	●	C1903	67
		●									●								●	C2159	71
			●								●							●	●	C1816 / C1823	72
			●												●		●	●	●	C1816 / C1823	73
				●				●							●			●			74
				●													●		●	C1937	75
				●			●	●									●		●	C2123	82
					●			●			●							●	●	C1623 / C2100	83
					●			●						●					●		84
					●			●									●		●	C1902 / C1971	85
					●				●			●						●	●	C1662	86
					●					●							●		●	C1803	87

GL AC-SYSTEMS c UL US

- 
- Mechanical Release
- EUCHNER**
Safety Switch TZ
Made in Germany

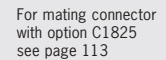
Series	Connection	Guard locking	Switch head	Switching element	Black cover			Red cover	
					24 V	110 V	230 V	24 V	110 V
TZ	M20x1.5	1 Mechanical	LE Left	SK: 528H, 1 NC \ominus + 1 NO ÜK: 528H, 1 NC \ominus + 1 NO	082 050 TZ1LE024M	083 160 TZ1LE110M	083 166 TZ1LE220M	083 164 TZ1LE024M-R	083 168 TZ1LE110M-R
				SK: 2121H, 4 NC \ominus ÜK: 2121H, 4 NC \ominus	On request	On request	On request	089 464 ¹⁾ TZ1LE024MVFGR1925	On request
				SK: 2131H, 3 NC \ominus + 1 NO ÜK: 3131H, 2 NC \ominus + 2 NO	083 965 TZ1LE024MVAB	088 023 TZ1LE110MVAB	088 029 TZ1LE220MVAB	089 434 TZ1LE024MVAB-R	On request
			RE Right	SK: 528H, 1 NC \ominus + 1 NO ÜK: 528H, 1 NC \ominus + 1 NO	082 051 TZ1RE024M	083 161 TZ1RE110M	083 167 TZ1RE220M	083 165 TZ1RE024M-R	089 448 TZ1RE110M-R
				SK: 2121H, 4 NC \ominus ÜK: 2121H, 4 NC \ominus	On request	On request	On request	089 465 ¹⁾ TZ1RE024MVFGR1925	On request
				SK: 2131H, 3 NC \ominus + 1 NO ÜK: 3131H, 2 NC \ominus + 2 NO	083 966 TZ1RE024MVAB	088 024 TZ1RE110MVAB	088 030 TZ1RE220MVAB	083 233 TZ1RE024MVAB-R	On request
		2 Electrical	LE Left	SK: 528H, 1 NC \ominus + 1 NO ÜK: 528H, 1 NC \ominus + 1 NO	090 559 TZ2LE024M	083 162 TZ2LE110M	088 031 TZ2LE220M	089 445 TZ2LE024M-R	On request
				SK: 2131H, 3 NC \ominus + 1 NO ÜK: 3131H, 2 NC \ominus + 2 NO	088 070 TZ2LE024MVAB	088 025 TZ2LE110MVAB	088 027 TZ2LE220MVAB	On request	On request
				SK: 528H, 1 NC \ominus + 1 NO ÜK: 528H, 1 NC \ominus + 1 NO	090 560 TZ2RE024M	083 163 TZ2RE110M	088 032 TZ2RE220M	089 446 TZ2RE024M-R	On request
			RE Right	SK: 2131H, 3 NC \ominus + 1 NO ÜK: 3131H, 2 NC \ominus + 2 NO	088 071 TZ2RE024MVAB	088 026 TZ2RE110MVAB	088 028 TZ2RE220MVAB	On request	On request



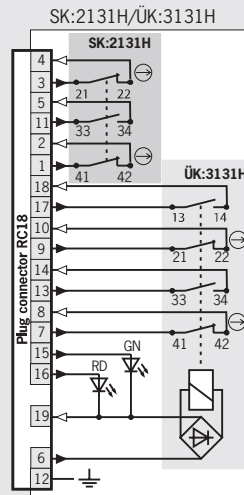


Plug connector RC18
18-pin + PE

Dimension drawings Actuating head on left is a mirror image



Wiring diagrams *Actuator inserted and locked*



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Black cover 24 V
TZ	RC18 ²⁾ Plug connector	1 Mechanical	LE Left	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	084 246 ³⁾ TZ1LE024RC18VAB-C1826
			RE Right	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	084 247 ³⁾ TZ1RE024RC18VAB-C1826
		2 Electrical	LE Left	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	085 180 ³⁾ TZ2LE024RC18VAB-C1826
			RE Right	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	085 181 ³⁾ TZ2RE024RC18VAB-C1826

2) **Important:** use suitable mating connector with option C1825!

3) Approval pending

Please turn over

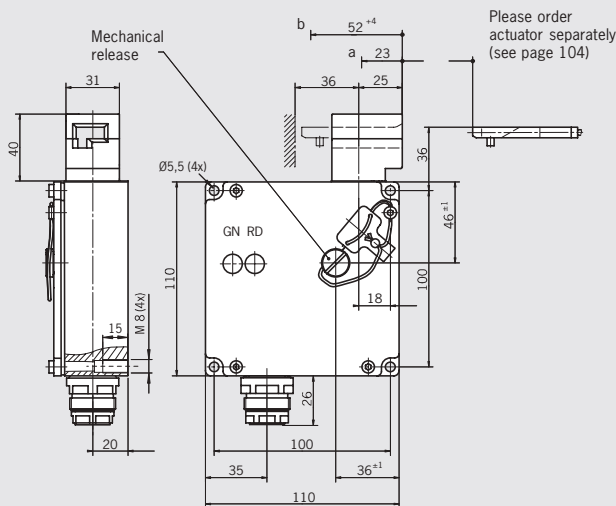
For safety precautions see page 164
For technical data see page 139





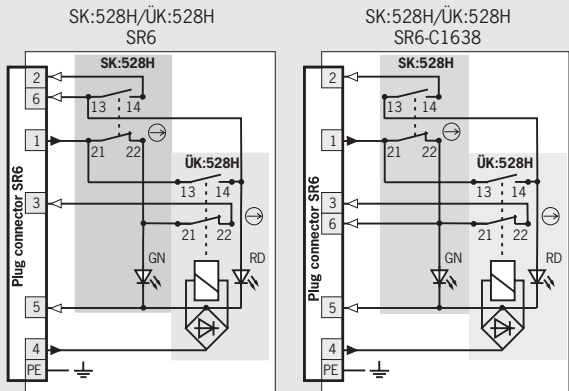
Plug connector SR6
6-pin + PE

Dimension drawings Actuating head on left is a mirror image



For mating connectors
see page 112

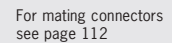
Wiring diagrams Actuator inserted and locked



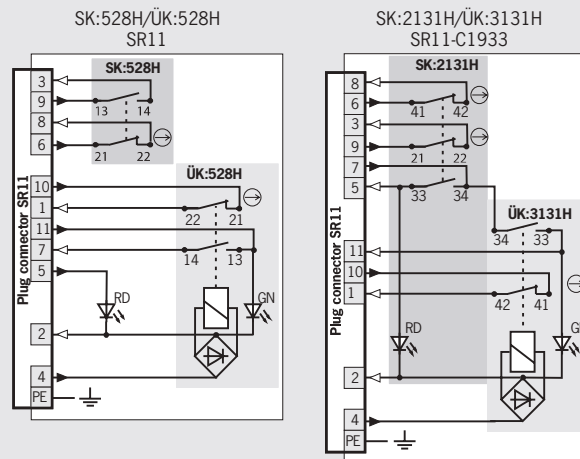
Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover			Red cover
						24 V	110 V	230 V	24 V
TZ	SR6 Plug connector	1 Mechanical	LE Left	SK: 528H, 1 NC ⊖ + 1 NO		046 502 TZ1LE024SR6	046 503 TZ1LE110SR6	046 504 TZ1LE220SR6	On request
				ÜK: 528H, 1 NC ⊖ + 1 NO	C1638 ¹⁾ Wiring	089 476 ¹⁾ TZ1LE024SR6-C1638	On request	On request	On request
			RE Right	SK: 528H, 1 NC ⊖ + 1 NO		046 190 TZ1RE024SR6	046 191 TZ1RE110SR6	051 879 TZ1RE220SR6	On request
				ÜK: 528H, 1 NC ⊖ + 1 NO	C1638 ¹⁾ Wiring	070 529 ¹⁾ TZ1RE024SR6-C1638	On request	On request	On request
		2 Electrical	LE Left	SK: 528H, 1 NC ⊖ + 1 NO		049 159 TZ2LE024SR6	052 914 TZ2LE110SR6	045 450 TZ2LE220SR6	046 915 TZ2LE024SR6-R
				ÜK: 528H, 1 NC ⊖ + 1 NO	C1638 ¹⁾ Wiring	076 294 ¹⁾ TZ2LE024SR6-C1638	On request	On request	On request
			RE Right	SK: 528H, 1 NC ⊖ + 1 NO		049 102 TZ2RE024SR6	049 238 TZ2RE110SR6	047 937 TZ2RE220SR6	059 672 TZ2RE024SR6-R
				ÜK: 528H, 1 NC ⊖ + 1 NO	C1638 ¹⁾ Wiring	055 819 ¹⁾ TZ2RE024SR6-C1638	On request	On request	On request

1) No BG approval



Wiring diagrams *Actuator inserted and locked*



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover 24 V
TZ	SR11 Plug connector	1 Mechanical	LE Left	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	C1933 ¹⁾ Alternative wiring	070 828 TZ1LE024SR11
				SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO		083 230 ¹⁾ TZ1LE024SR11VAB-C1933
			RE Right	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	C1933 ¹⁾ Alternative wiring	070 826 TZ1RE024SR11
				SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO		083 231 ¹⁾ TZ1RE024SR11VAB-C1933
		2 Electrical	LE Left	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO		070 958 TZ2LE024SR11
				SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO		070 957 TZ2RE024SR11
			RE Right	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO		

1) No BG approval	

Please turn over

For safety precautions see page 164
For technical data see page 139

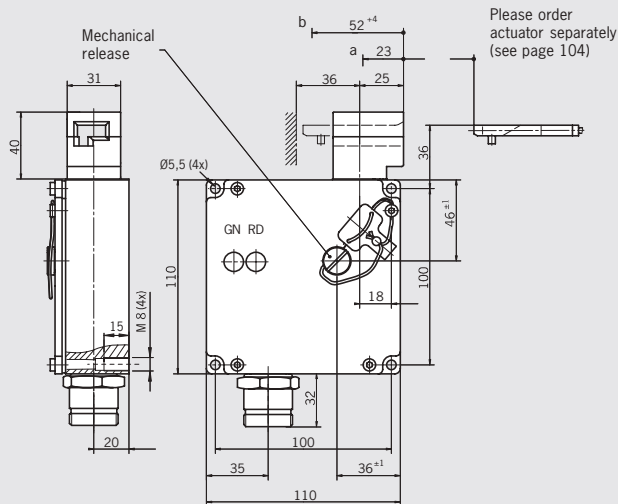
Safety Switches with Separate Actuator, Metal Housing

EUCHNER



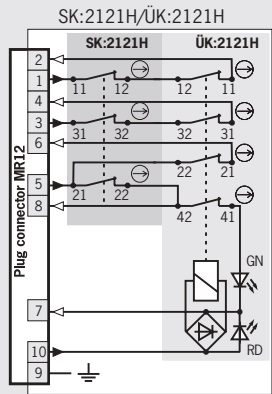
Plug connector MR12
11-pin + PE

Dimension drawings Actuating head on left is a mirror image



For mating connectors
see page 124

Wiring diagrams Actuator inserted and locked



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Ver-sion	Black cover			Red cover
						24 V	110 V	230 V	24 V
TZ	MR12 Plug connector	1 Mechanical	LE Left	SK: 2121H, 4 NC ⊖ ÜK: 2121H, 4 NC ⊖		On request	On request	On request	083 190 TZ1LE024BHAVFG-RC1924
			RE Right	SK: 2121H, 4 NC ⊖ ÜK: 2121H, 4 NC ⊖		On request	On request	On request	083 191 TZ1RE024BHAVFG-RC1924

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Mechanical release on the front
- ▶ Two LEDs, red and green
- ▶ Plug connectors
- ▶ Actuating head fitted left or right



Mechanical release

Is used for releasing the guard locking with the aid of a tool.

Solenoid operating voltage and LED function display

The following voltage ranges are available:

- ▶ 24 V AC/DC -15%, +10%
- ▶ 110 V AC -15%, +10%

Guard locking types

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

TZ2 Open-circuit current principle, guard locking by applying voltage to the solenoid. Release by spring force.

Switching elements (see also Page 13/14)

SK For monitoring the door/actuator position

ÜK For monitoring the guard locking (built-in solenoid)

For combinations available see ordering table:

- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **2121H** Slow-action switching element
4 NC \ominus
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

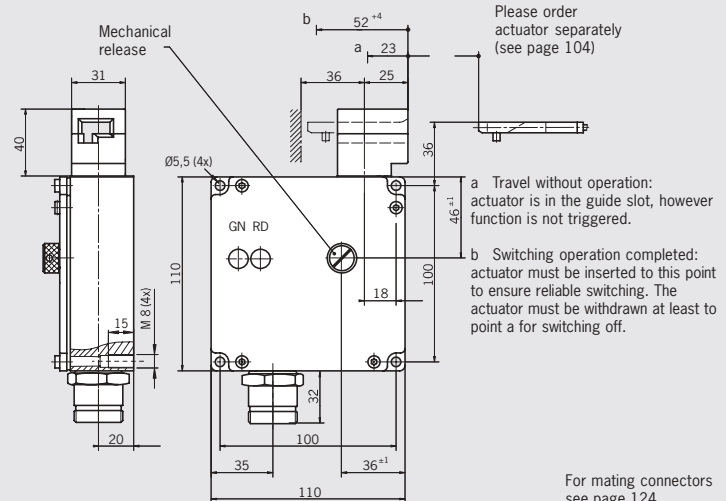
Plug connector MR8
7-pin + PE



Plug connector MR10
9-pin + PE

Dimension drawings

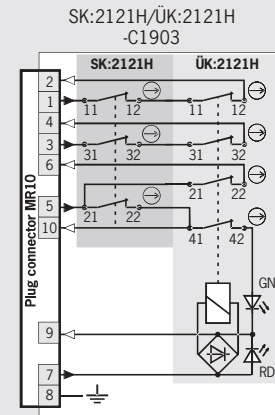
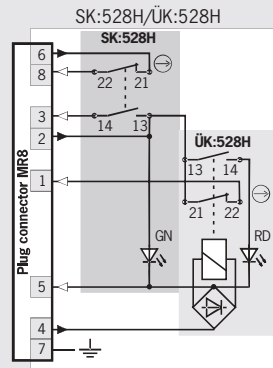
Actuating head on left is a mirror image



For mating connectors see page 124

Wiring diagrams

Actuator inserted and locked



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover		Red cover
						24 V	110 V	24 V
TZ	MR8 Plug connector	1 Mechanical	LE Left	SK: 528H, 1 NC \ominus + 1 NO ÜK: 528H, 1 NC + 1 NO	Mechanical release cannot be sealed	054 964 TZ1LE024PGOR8C	074 917 TZ1LE110PGOR8C	On request
			RE Right	SK: 528H, 1 NC \ominus + 1 NO ÜK: 528H, 1 NC \ominus + 1 NO	Mechanical release cannot be sealed	059 920 TZ1RE024PGOR8C	074 916 TZ1RE110PGOR8C	On request
			LE Left	SK: 2121H, 4 NC \ominus ÜK: 2121H, 4 NC \ominus	Mechanical release cannot be sealed	On request	On request	082 095 TZ1LE024BHA-C1903
			RE Right	SK: 2121H, 4 NC \ominus ÜK: 2121H, 4 NC \ominus	Mechanical release cannot be sealed	On request	On request	082 096 TZ1RE024BHA-C1903
	MR10 Plug connector	2 Electrical	LE Left	SK: 2121H, 4 NC \ominus ÜK: 2121H, 4 NC \ominus	Mechanical release cannot be sealed	On request	On request	082 083 TZ2LE024BHA-C1903
			RE Right	SK: 2121H, 4 NC \ominus ÜK: 2121H, 4 NC \ominus	Mechanical release cannot be sealed	On request	On request	082 084 TZ2RE024BHA-C1903

GL cULus

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Series		Connection	Guard locking	Switch head	Switching element	Version	Black cover
							24 V
TZ	M20x1.5	1 Mechanical	LE Left	SK: 528H , 1 NC \ominus + 1 NO ÜK: 528H , 1 NC \ominus + 1 NO	With protective plate		089 470 TZ1LE024M-089470
			RE Right	SK: 528H , 1 NC \ominus + 1 NO ÜK: 528H , 1 NC \ominus + 1 NO	With protective plate		089 471 TZ1RE024M-089471

SK:528H/ÜK:528H

SK:528H

ÜK:528H

PCB

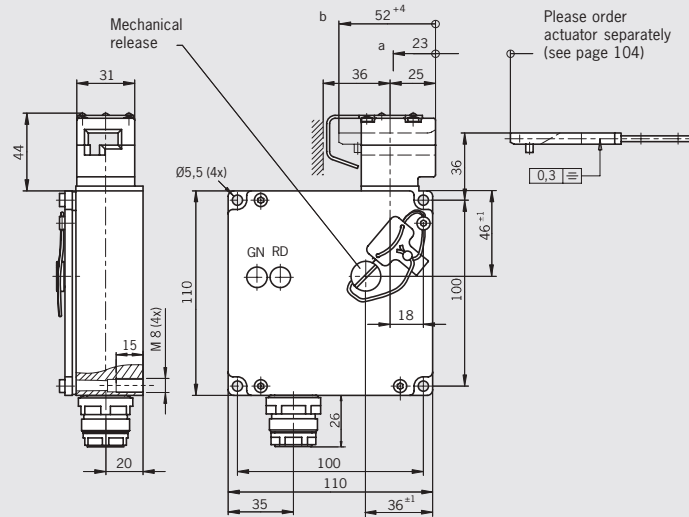
14, 13, 22, 21, 14, 22, 21, 1, 2, 5, 6, 3, 4

PE



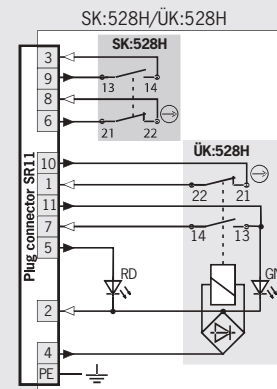
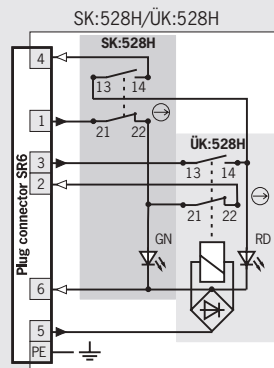
Plug connector SR11
11-pin + PE

Dimension drawings Actuating head on left is a mirror image



For mating connectors
see page 112

Wiring diagrams Actuator inserted and locked



Ordering table

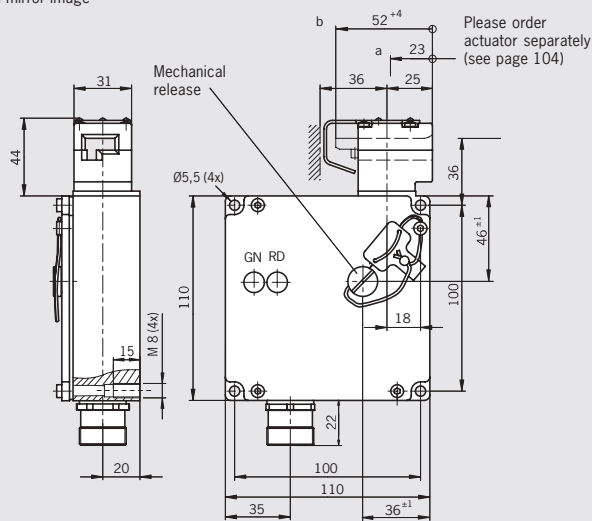
Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover	
						24 V	
TZ	SR6 Plug connector	1 Mechanical	LE	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	With protective plate	059 694 TZ1LE024SR6-C1677	
			RE	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	With protective plate	059 692 TZ1RE024SR6-C1677	
		2 Electrical	LE	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	With protective plate	059 852 TZ2LE024SR6-C1677	
			RE	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	With protective plate	059 699 TZ2RE024SR6-C1677	
	SR11 Plug connector	1 Mechanical	LE	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	With protective plate	093 860 TZ1LE024SR11-093860	
			RE	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	With protective plate	093 861 TZ1RE024SR11-093861	

For safety precautions see page 164
For technical data see page 139



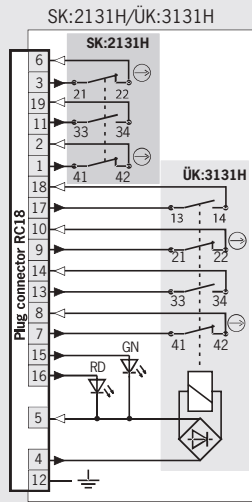
Plug connector RC18
18-pin + PE

Dimension drawings Actuating head on left is a mirror image



For mating connectors
see page 114

Wiring diagrams Actuator inserted and locked



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover
						24 V
TZ	RC18 Plug connector	2 Electrical	LE	SK: 2131H, 3 NC + 1 NO	With protective plate	093 862
			Left	ÜK: 3131H, 2 NC + 2 NO		TZ1LE024RC18VAB-093862
			RE	SK: 2131H, 3 NC + 1 NO	With protective plate	093 863
			Right	ÜK: 3131H, 2 NC + 2 NO		TZ1RE024RC18VAB-093863

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Mechanical release on the front, release with a triangular key acc. to DIN 22417
- ▶ Two LEDs, red and green
- ▶ Actuating head fitted left or right



Mechanical release

This releases the guard locking after operation with a triangular key acc. to DIN 22417.

Solenoid operating voltage and LED function display

The following voltage range is available:

- ▶ 24 V AC/DC -15%, +10%

Guard locking types

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

Switching elements (see also Page 13/14)

SK For monitoring the door/actuator position

ÜK For monitoring the guard locking (built-in solenoid)

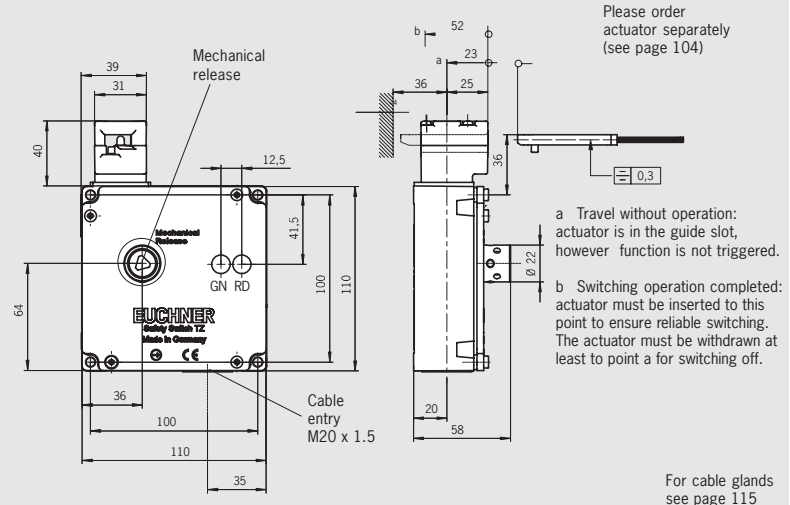
For combinations available see ordering table:

- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Cable entry M20 x 1.5

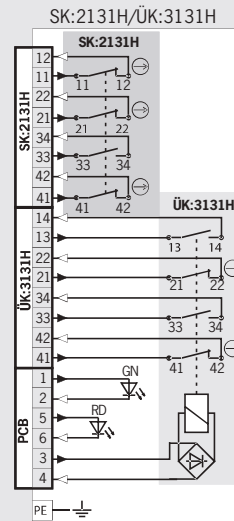
Dimension drawings

Actuating head on left is a mirror image



Wiring diagrams

Actuator inserted and locked



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover
						24 V
TZ	M20x1.5	1 Mechanical	LE Left	SK: 2131H, 3 NC \ominus + 1 NO ÜK: 3131H, 2 NC \ominus + 2 NO	Mechanical release with triangular key	098 718 TZ1LB024MVAB-C2159
			RE Right	SK: 2131H, 3 NC \ominus + 1 NO ÜK: 3131H, 2 NC \ominus + 2 NO	Mechanical release with triangular key	098 717 TZ1RB024MVAB-C2159

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Emergency release on the front with pushbutton
- ▶ Two LEDs, red and green
- ▶ Plug connector optional
- ▶ Actuating head fitted left or right



Emergency release

Is used for the manual release of the guard locking without tools. It is possible to remove the disable and return the switch to its operating state by hand without tools.

Solenoid operating voltage and LED function display

The following voltage range is available:

- ▶ 24 V AC/DC -15%, +10%

Guard locking types

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

TZ2 Open-circuit current principle, guard locking by applying voltage to the solenoid. Release by spring force.

Switching elements (see also Page 13/14)

SK For monitoring the door/actuator position

ÜK For monitoring the guard locking (built-in solenoid)

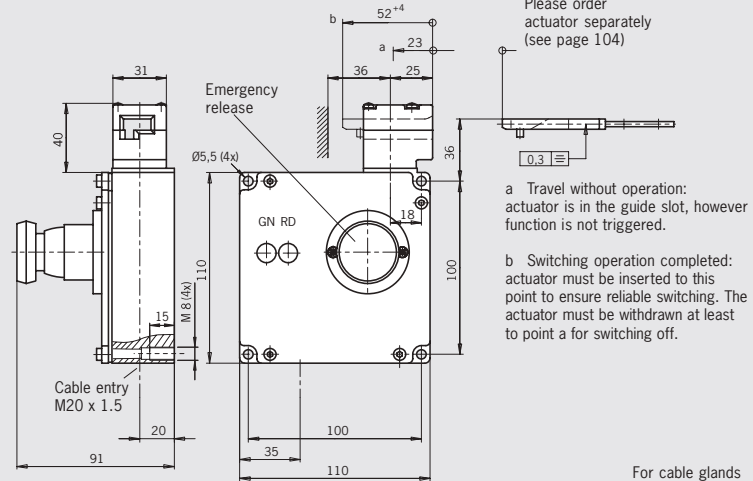
For combinations available see ordering table:

- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Cable entry M20 x 1.5

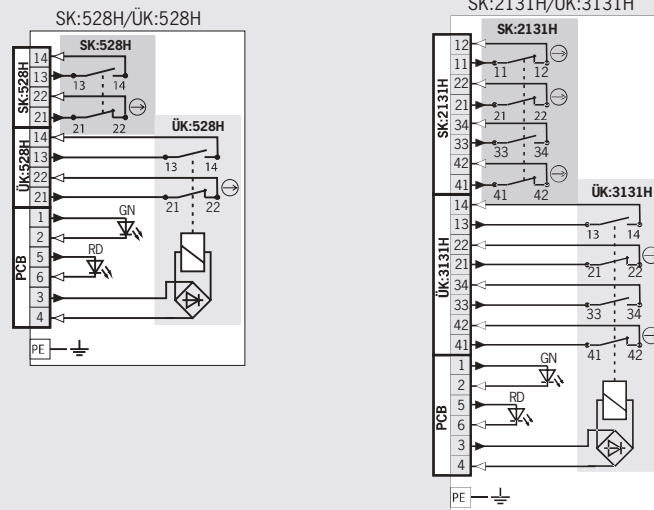
Dimension drawings

Actuating head on left is a mirror image



Wiring diagrams

Actuator inserted and locked



Ordering table

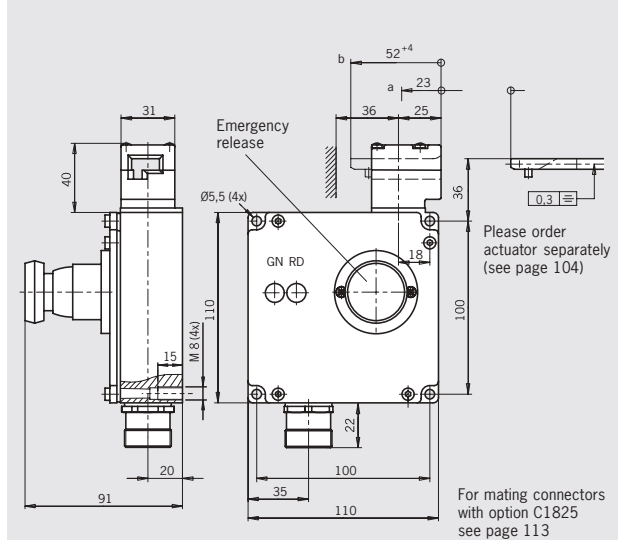
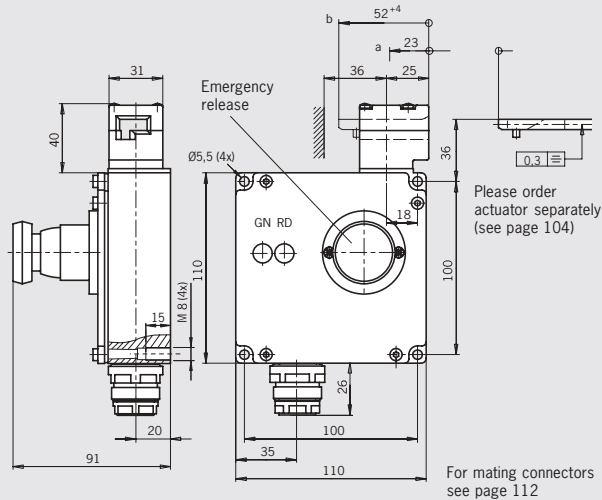
Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover
						24 V
TZ	M20x1.5	1 Mechanical	LE	SK: 528H, 1 NC \ominus + 1 NO	Emergency release	089 477
			Left	ÜK: 528H, 1 NC \ominus + 1 NO	(blue pushbutton)	TZ1LE024M-C1816
			RE	SK: 528H, 1 NC \ominus + 1 NO	Emergency release	096 901
			Right	ÜK: 528H, 1 NC \ominus + 1 NO	(blue pushbutton)	TZ1RE024M-C1816
		2 Electrical	LE	SK: 528H, 1 NC \ominus + 1 NO	Emergency release	087 992
			Left	ÜK: 528H, 1 NC \ominus + 1 NO	(blue pushbutton)	TZ2LE024M-C1816
				SK: 2131H, 3 NC \ominus + 1 NO	Emergency release	089 455
				ÜK: 3131H, 2 NC \ominus + 2 NO	(blue pushbutton)	TZ2LE024MVAB-C1823
			RE	SK: 528H, 1 NC \ominus + 1 NO	Emergency release	087 993
			Right	ÜK: 528H, 1 NC \ominus + 1 NO	(blue pushbutton)	TZ2RE024M-C1816
				SK: 2131H, 3 NC \ominus + 1 NO	Emergency release	089 456
				ÜK: 3131H, 2 NC \ominus + 2 NO	(blue pushbutton)	TZ2RE024MVAB-C1823



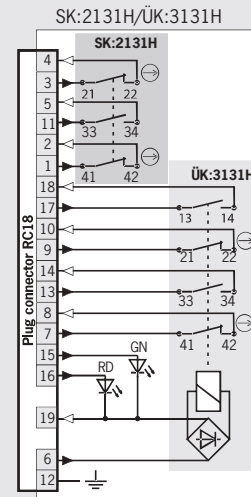
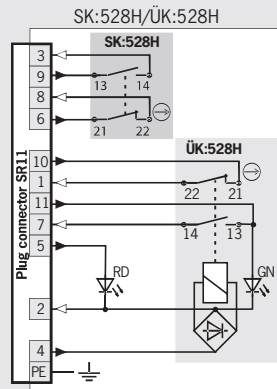
Plug connector SR11
11-pin + PE

Plug connector RC18
18-pin + PE

Dimension drawings Actuating head on left is a mirror image



Wiring diagrams *Actuator inserted and locked*



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover
						24 V
TZ	SR11 Plug connector	1 Mechanical	LE Left	SK: 528H , 1 NC \ominus + 1 NO ÜK: 528H , 1 NC \ominus + 1 NO	Emergency release (blue pushbutton)	077 044 TZ1LE024SR11-C1816
			RE Right	SK: 528H , 1 NC \ominus + 1 NO ÜK: 528H , 1 NC \ominus + 1 NO	Emergency release (blue pushbutton)	077 042 TZ1RE024SR11-C1816
	RC18 ¹⁾ Plug connector	1 Mechanical	LE Left	SK: 2131H , 3 NC \ominus + 1 NO ÜK: 3131H , 2 NC \ominus + 2 NO	Emergency release (blue pushbutton)	088 090 TZ1LE024RC18VAB-C1823
			RE Right	SK: 2131H , 3 NC \ominus + 1 NO ÜK: 3131H , 2 NC \ominus + 2 NO	Emergency release (blue pushbutton)	088 091 TZ1RE024RC18VAB-C1823

1) **Important:** use suitable mating connector with option C1825!

For safety precautions see page 164
For technical data see page 139

GL

- 
- A black rectangular emergency release switch with a silver-colored lever on the left side. The text "Emergency Release" is printed in white above a circular indicator window. Below the window, the brand name "EUCHNER" is prominently displayed in white, followed by "Safety Switch for" and "Made in Germany". At the bottom, there are two circular symbols: a triangle inside a circle and the CE mark.

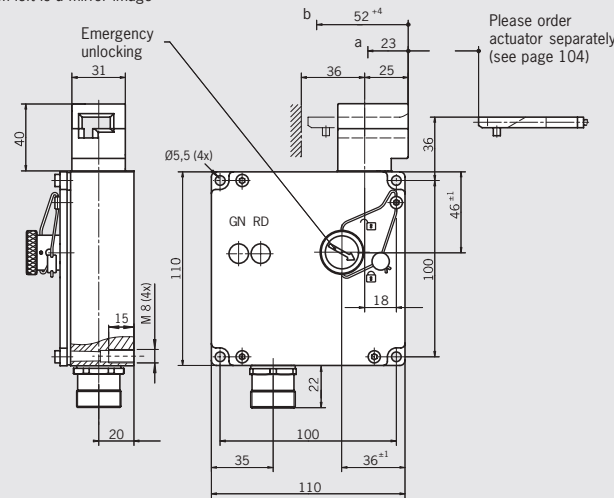
Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover
						24 V
TZ	SR11 Plug connector	1 Mechanical	LE	SK: 528H , 1NC ⊖ + 1 NO	Emergency unlocking (rotary knob), with protective plate	094 342
			Left	ÜK: 528H , 1NC ⊖ + 1 NO		TZ1LE024SR11-094342
			RE	SK: 528H , 1NC ⊖ + 1 NO	Emergency unlocking (rotary knob), with protective plate	094 343
			Right	ÜK: 528H , 1NC ⊖ + 1 NO		TZ1RE024SR11-094343



Plug connector RC18 18-pin + PE

Dimension drawings

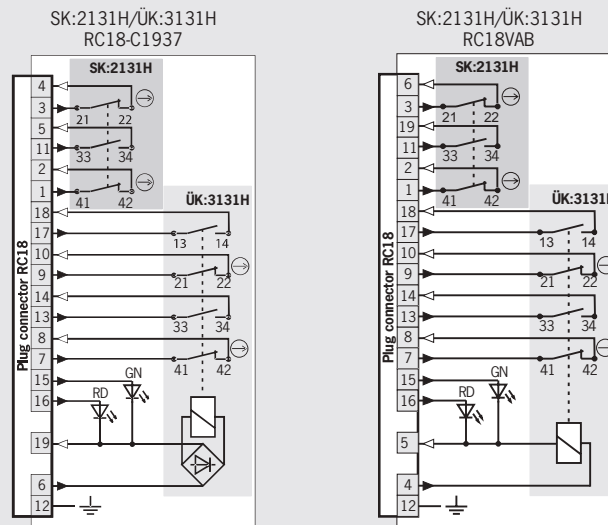
Actuating head on left is a mirror image



For mating connector
with option C1825
see page 113

Wiring diagrams

Actuator inserted and locked



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover 24 V
TZ	RC18 ¹⁾ Plug connector	1 Mechanical	LE Left	SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Emergency unlocking (rotary knob)	074 260 TZ1LE024RC18VAB-C1937
			RE Right	SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Emergency unlocking (rotary knob)	074 261 TZ1RE024RC18VAB-C1937
	RC18 Plug connector	1 Mechanical	LE Left	SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Emergency unlocking (rotary knob), alternative wiring	092 998 ²⁾ TZ1LE024RC18VAB-092998
			RE Right	SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Emergency unlocking (rotary knob), alternative wiring	092 999 ²⁾ TZ1RE024RC18VAB-092999
			LE Left	SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Emergency unlocking (rotary knob), alternative wiring	092 998 ²⁾ TZ1LE024RC18VAB-092998
			RE Right	SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Emergency unlocking (rotary knob), alternative wiring	092 999 ²⁾ TZ1RE024RC18VAB-092999

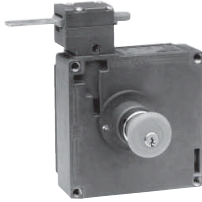
1) Important: use suitable mating connector with option C1825!

2) No BG approval

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Mechanical release on the front
- ▶ Escape release on the rear with key button
- ▶ Two LEDs, red and green
- ▶ Plug connector optional
- ▶ Actuating head fitted left or right



Escape release

Is used for the manual release of the guard locking from within the danger area without tools. The disable can only be removed and the switch returned to its operating state using a key included (2 keys included).

Solenoid operating voltage and LED function display

The following voltage range is available:

- ▶ 24 V AC/DC -15%, +10%
- ▶ 110 V AC -15%, +10%

Guard locking types

- TZ1** Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.
- TZ2** Open-circuit current principle, guard locking by applying voltage to the solenoid. Release by spring force.

Switching elements (see also Page 13/14)

SK For monitoring the door/actuator position
ÜK For monitoring the guard locking (built-in solenoid)

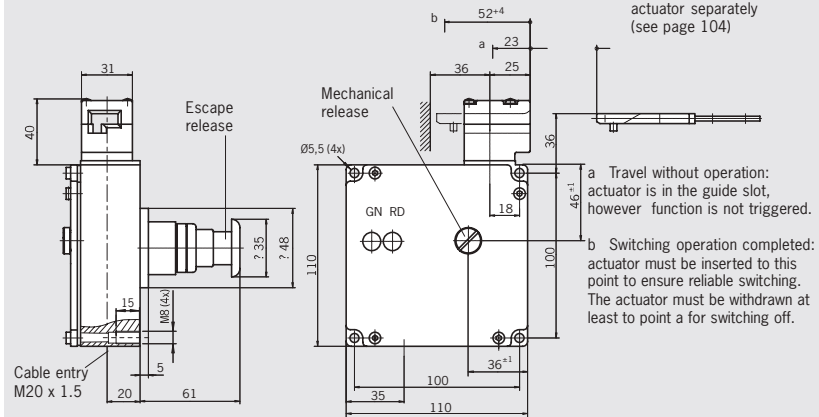
For combinations available see ordering table:

- ▶ **528H** Slow-action switching element
1 NC ⊖ + 1 NO
- ▶ **2131H** Slow-action switching element
3 NC ⊖ + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC ⊖ + 2 NO

Cable entry M20 x 1.5

Dimension drawings

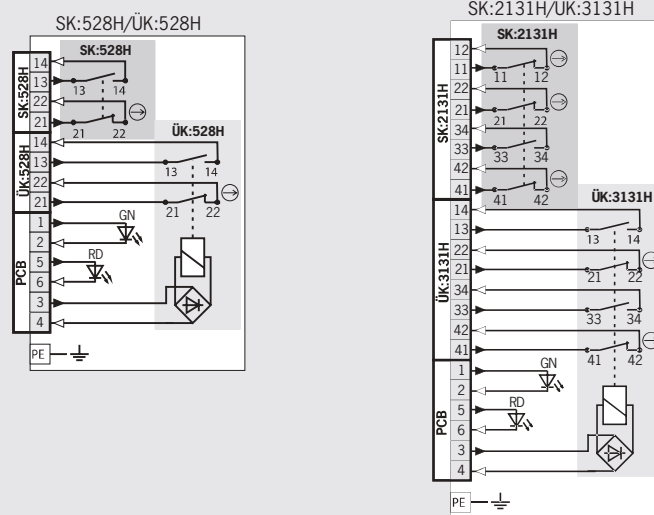
Actuating head on left is a mirror image



For cable glands see page 115

Wiring diagrams

Actuator inserted and locked



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover	
						24 V	110 V
TZ	M20x1.5	1 Mechanical	LE Left	SK: 528H, 1 NC ⊖ + 1 NO	Escape release (red key button)	087 990 TZ1LE024M-C1815	On request
				ÜK: 528H, 1 NC ⊖ + 1 NO	Escape release (red key button)	089 468 TZ1LE024MVAB-C1828	094 311 TZ1LE110MVAB-C1828
			RE Right	SK: 528H, 2 NC ⊖ + 2 NO	Escape release (red key button)	087 991 TZ1RE024M-C1815	On request
				ÜK: 528H, 1 NC ⊖ + 1 NO	Escape release (red key button)	089 469 TZ1RE024MVAB-C1828	094 312 TZ1RE110MVAB-C1828
		2 Electrical	LE Left	SK: 528H, 1 NC ⊖ + 1 NO	Escape release (red key button)	089 460 TZ2LE024M-C1815	On request
				ÜK: 528H, 1 NC ⊖ + 1 NO	Escape release (red key button)	087 290 TZ2LE024MVAB-C1828	On request
			RE Right	SK: 528H, 3 NC ⊖ + 1 NO	Escape release (red key button)	089 461 TZ2RE024M-C1815	On request
				ÜK: 528H, 1 NC ⊖ + 1 NO	Escape release (red key button)	087 291 TZ2RE024MVAB-C1828	On request

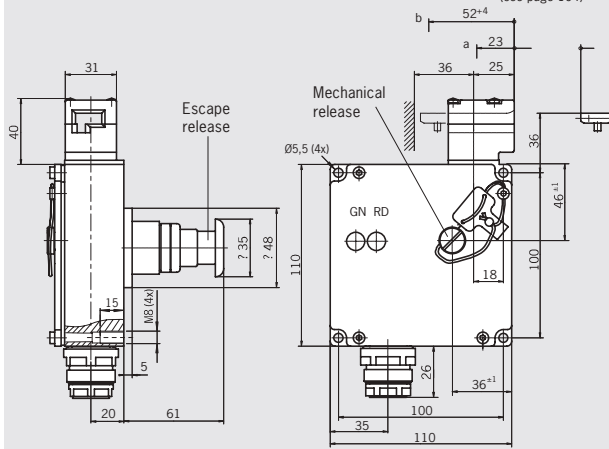


Plug connector SR11
11-pin + PE

Plug connector RC18
18-pin + PE

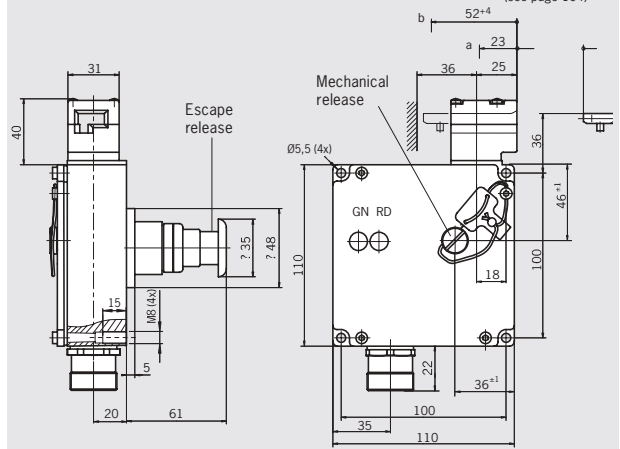
Dimension drawings Actuating head on left is a mirror image

Please order
actuator separately
(see page 104)



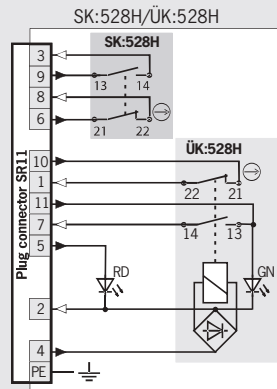
For mating connectors
see page 112

Please order
actuator separately
(see page 104)

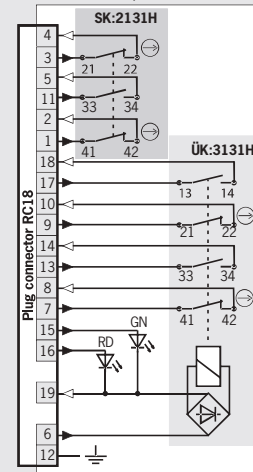


For mating connector with option
C1825 see page 113

Wiring diagrams *Actuator inserted and locked*



SK:2131H/ÜK:3131H



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover
						24 V
TZ	SR11 Plug connector	2 Electrical	LE Left	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 2 NO	Escape release (key button)	079 660 TZ2LE024SR11-C1815
			RE Right	SK: 528H , 1 NC ⊖ + 1 NO ÜK: 528H , 1 NC ⊖ + 1 NO	Escape release (key button)	079 661 TZ2RE024SR11-C1815
	RC18 ¹⁾ Plug connector	1 Mechanical	LE Left	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	Escape release (key button)	090 352 TZ1LE024RC18VAB-C1828
			RE Right	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	Escape release (key button)	090 353 TZ1RE024RC18VAB-C1828
		2 Electrical	LE Left	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	Escape release (key button)	093 103 TZ2LE024RC18VAB-C1828
			RE Right	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	Escape release (key button)	093 104 TZ2RE024RC18VAB-C1828

1) **Important:** use suitable mating connector with option C1825!

For safety precautions see page 164
For technical data see page 139

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Mechanical release on the front
- ▶ Escape release on the rear with pushbutton
- ▶ Two LEDs, red and green
- ▶ Plug connector optional
- ▶ Actuating head fitted left or right



Escape release

Is used for the manual release of the guard locking from within the danger area without tools.

Solenoid operating voltage and LED function display

The following voltage ranges are available:

- ▶ 24 V AC/DC -15%, +10%
- ▶ 110 V AC -15%, +10%

Guard locking types

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

Switching elements (see also Page 13/14)

SK For monitoring the door/actuator position

ÜK For monitoring the guard locking (built-in solenoid)

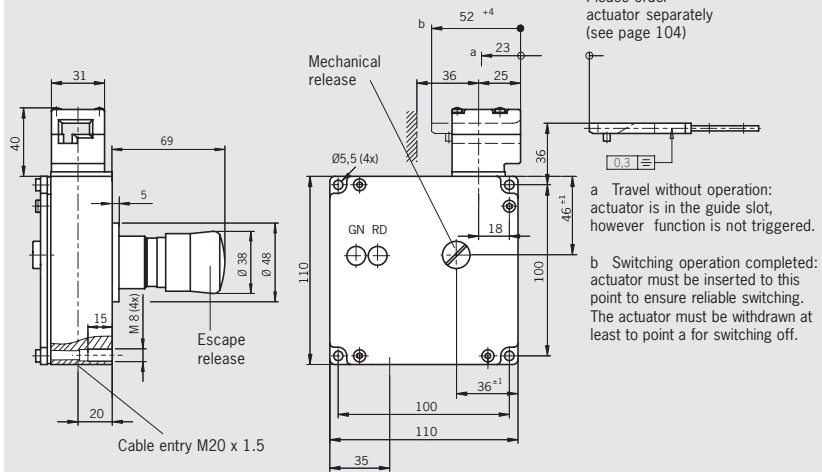
For combinations available see ordering table:

- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Cable entry M20 x 1.5

Dimension drawings

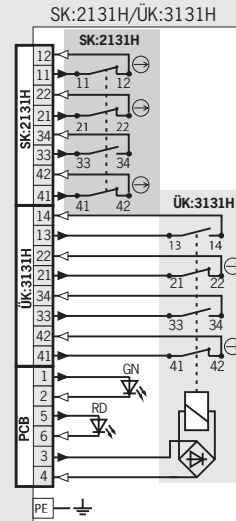
Actuating head on left is a mirror image



For cable glands see page 115

Wiring diagrams

Actuator inserted and locked

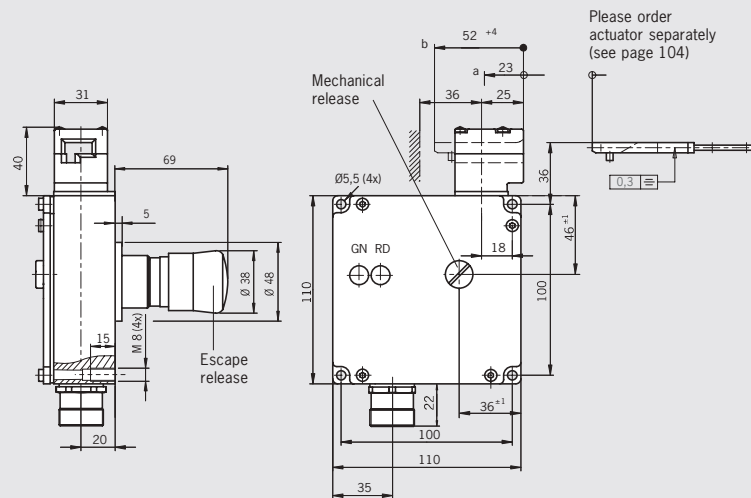


Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover	
						24 V	110 V
TZ	M20x1.5	1 Mechanical	LE Left	SK: 2131H, 3 NC \ominus + 1 NO ÜK: 3131H, 2 NC \ominus + 2 NO	C2082 Escape release (pushbutton)	096 487 TZ1LE024MVAB-C2082	095 992 TZ1LE110MVAB-C2082
			RE Right	SK: 2131H, 3 NC \ominus + 1 NO ÜK: 3131H, 2 NC \ominus + 2 NO	C2082 Escape release (pushbutton)	096 488 TZ1RE024MVAB-C2082	095 103 TZ1RE110MVAB-C2082

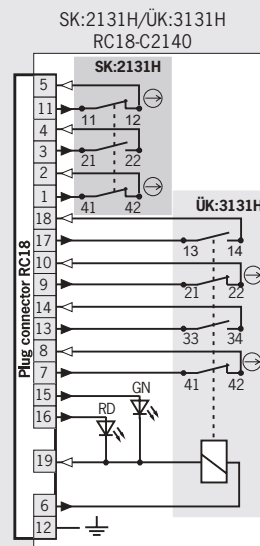
Plug connector RC18
18-pin + PE

Dimension drawings Actuating head on left is a mirror image



For mating connectors see page 114

Wiring diagrams *Actuator inserted and locked*



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover
						24 V
TZ	RC18 Plug connector	1 Mechanical	LE Left	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	C2140 Escape release (pushbutton)	098 297 TZ1LE024RC18VAB-C2140
			RE Right	SK: 2131H , 3 NC ⊖ + 1 NO ÜK: 3131H , 2 NC ⊖ + 2 NO	C2140 Escape release (pushbutton)	098 298 TZ1RE024RC18VAB-C2140

For safety precautions see page 164
For technical data see page 139

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Mechanical release on the front
- ▶ Escape release on the rear with pushbutton
- ▶ Two LEDs, red and green
- ▶ Plug connector optional
- ▶ Actuating head fitted left or right



Escape release

Is used for the manual release of the guard locking from within the danger area without tools.

Solenoid operating voltage and LED function display

The following voltage ranges are available:

- ▶ 24 V AC/DC -15%, +10%
- ▶ 110 V AC -15%, +10%
- ▶ 230 V AC -15%, +10%

Guard locking types

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

Switching elements (see also Page 13/14)

SK For monitoring the door/actuator position
ÜK For monitoring the guard locking (built-in solenoid)

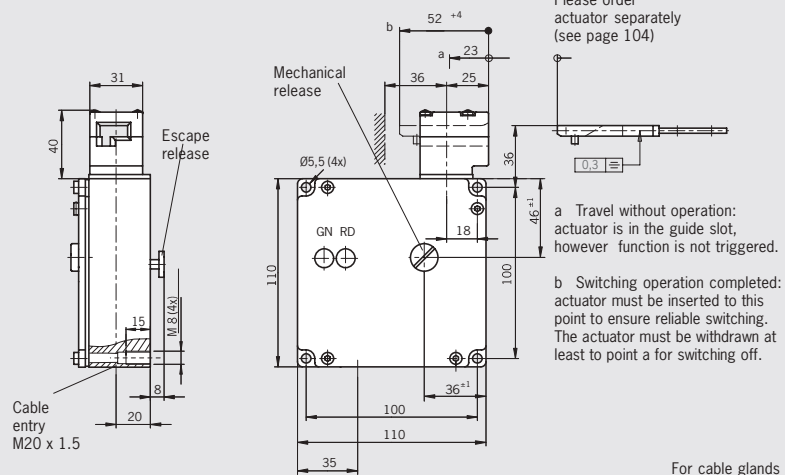
For combinations available see ordering table:

- ▶ **528H** Slow-action switching element
1 NC ⊖ + 1 NO
- ▶ **2131H** Slow-action switching element
3 NC ⊖ + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC ⊖ + 2 NO

Cable entry M20 x 1.5

Dimension drawings

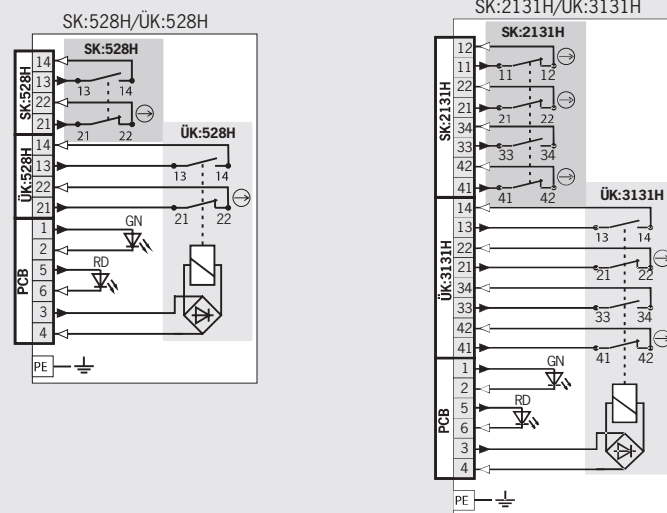
Actuating head on left is a mirror image



For cable glands see page 115

Wiring diagrams

Actuator inserted and locked



Ordering table

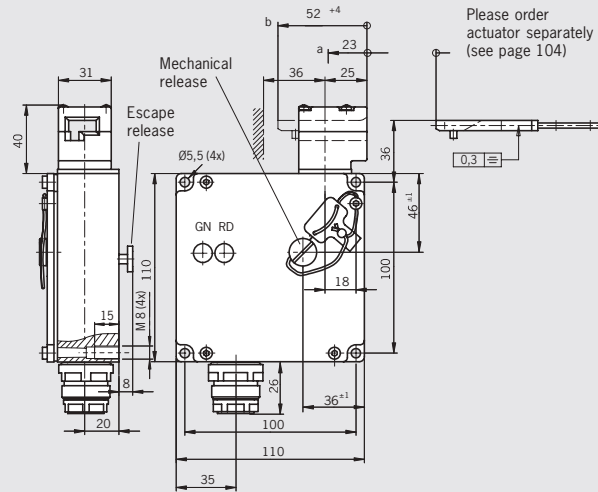
Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover		
						24 V	110 V	230 V
TZ	M20x1.5	1 Mechanical	LE Left	SK: 528H, 1 NC ⊖ + 1 NO ÜK: 528H, 1 NC ⊖ + 1 NO	C1684 Escape release (pushbutton)	083 170 TZ1LE024M-C1684	089 924 TZ1LE110M-C1684	093 770 TZ1LE220M-C1684
				SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	C1684 Escape release (pushbutton)	084 820 TZ1LE024MVAB-C1684	on request	On request
			RE Right	SK: 528H, 1 NC ⊖ + 1 NO ÜK: 528H, 1 NC ⊖ + 1 NO	C1684 Escape release (pushbutton)	083 171 TZ1RE024M-C1684	089 475 TZ1RE110M-C1684	093 771 TZ1RE220M-C1684
				SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	C1684 Escape release (pushbutton)	088 084 TZ1RE024MVAB-C1684	On request	On request



Plug connector SR11 11-pin + PE

Dimension drawings

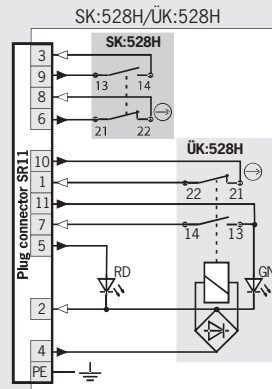
Actuating head on left is a mirror image



For mating connectors see page 112

Wiring diagrams

Actuator inserted and locked



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover
						24 V
TZ	SR11 Plug connector	1 Mechanical	LE Left	SK: 528H, 1 NC + 1 NO ÜK: 528H, 1 NC + 1 NO	C1684 Escape release (pushbutton)	070 886 TZ1LE024SR11-C1684
			RE Right	SK: 528H, 1 NC + 1 NO ÜK: 528H, 1 NC + 1 NO	C1684 Escape release (pushbutton)	070 884 TZ1RE024SR11-C1684

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Emergency unlocking on the front with rotary knob
- ▶ Escape release on the rear with pushbutton
- ▶ Protective plate for switch head
- ▶ Two LEDs, red and green
- ▶ Actuating head fitted left or right



Emergency unlocking

Is used for the manual release of the guard locking without tools. The emergency unlocking mechanism must be returned to the locked state manually. A sealing wire can be fitted to protect against tampering. Lead sealing kit and tool included.

Escape release

Is used for the manual release of the guard locking from within the danger area without tools.

Protective plate for switch head

Makes it more difficult to tamper with the switch.

Solenoid operating voltage and LED function display

The following voltage range is available:

- ▶ 24 V AC/DC -15%, +10%

Guard locking types

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

Switching elements (see also Page 13/14)

SK For monitoring the door/actuator position

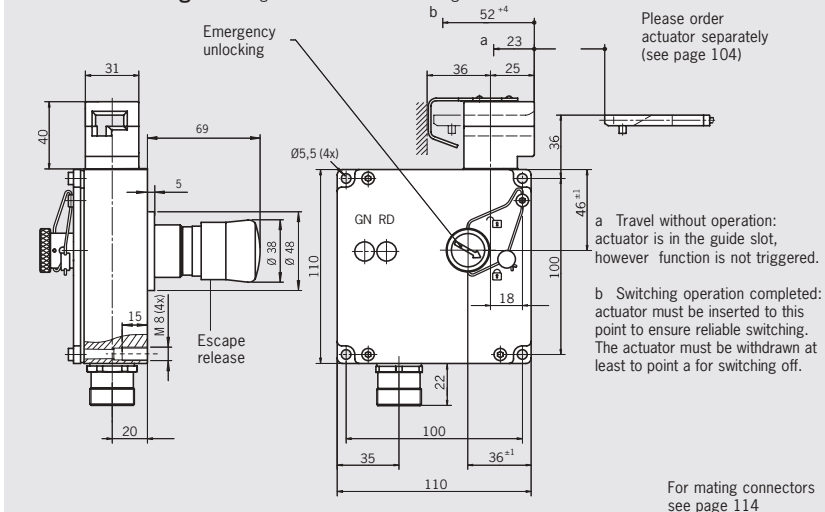
ÜK For monitoring the guard locking (built-in solenoid)

For combinations available see ordering table:

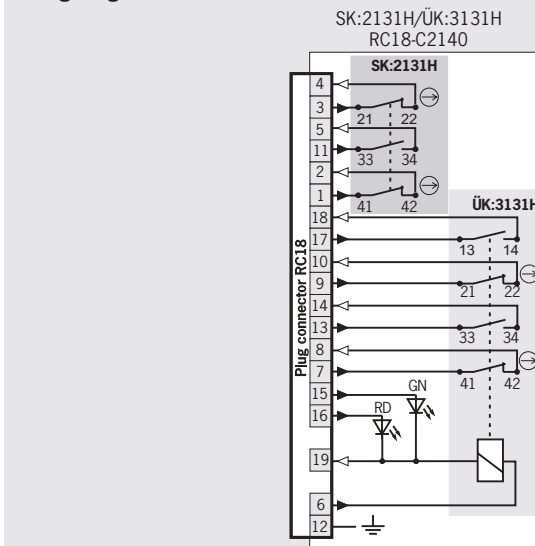
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Plug connector RC18
18-pin + PE

Dimension drawings



Wiring diagrams



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Black cover 24 V
TZ	RC18 Plug connector	1 Mechanical	LE Left	SK: 2131H , 3 NC \ominus + 1 NO ÜK: 3131H , 2 NC \ominus + 2 NO	Emergency unlocking (rotary knob), escape release (pushbutton), with protective plate	097 347 TZ1LE024RC18VAB-C2123
			RE Right	SK: 2131H , 3 NC \ominus + 1 NO ÜK: 3131H , 2 NC \ominus + 2 NO	Emergency unlocking (rotary knob), escape release (pushbutton), with protective plate	097 348 TZ1RE024RC18VAB-C2123

Safety Switches with Separate Actuator, Metal Housing **EUCHNER**

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Without mechanical release
- ▶ Protective plate for switch head optional
- ▶ Two LEDs, red and green
- ▶ Plug connector optional
- ▶ Actuating head fitted left or right



Protective plate for switch head

Makes it more difficult to tamper with the switch.

Solenoid operating voltage and LED function display

The following voltage ranges are available:

- ▶ 24 V AC/DC -15%, +10%
- ▶ 110 V AC -15%, +10%

Guard locking types

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

Switching elements (see also Page 13/14)

SK For monitoring the door/actuator position
ÜK For monitoring the guard locking (built-in solenoid)

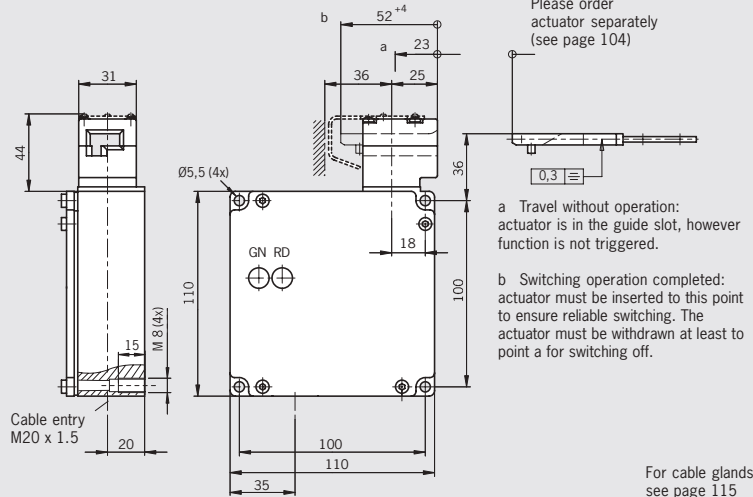
For combinations available see ordering table:

- ▶ **528H** Slow-action switching element
1 NC ⊖ + 1 NO
- ▶ **2121H** Slow-action switching element
4 NC ⊖
- ▶ **2131H** Slow-action switching element
3 NC ⊖ + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC ⊖ + 2 NO

Cable entry M20 x 1.5

Dimension drawings

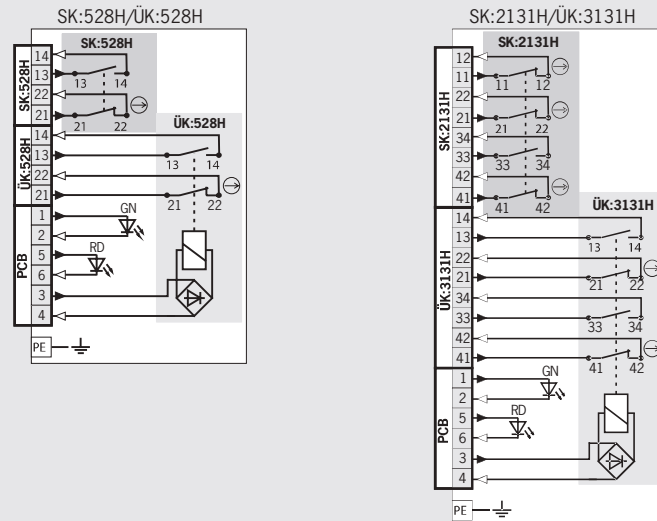
Actuating head on left is a mirror image



For cable glands see page 115

Wiring diagrams

Actuator inserted and locked



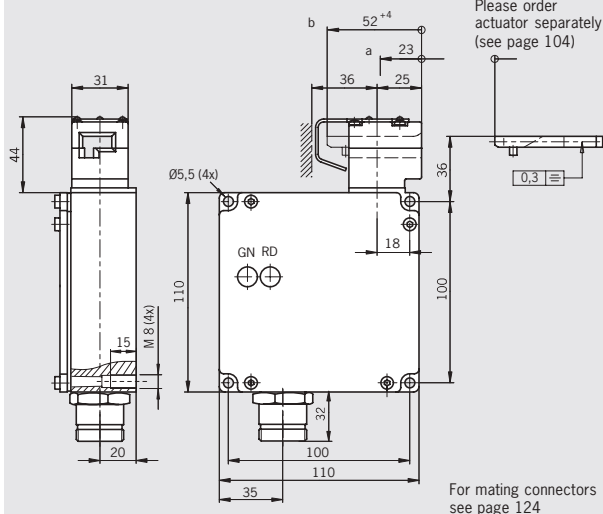
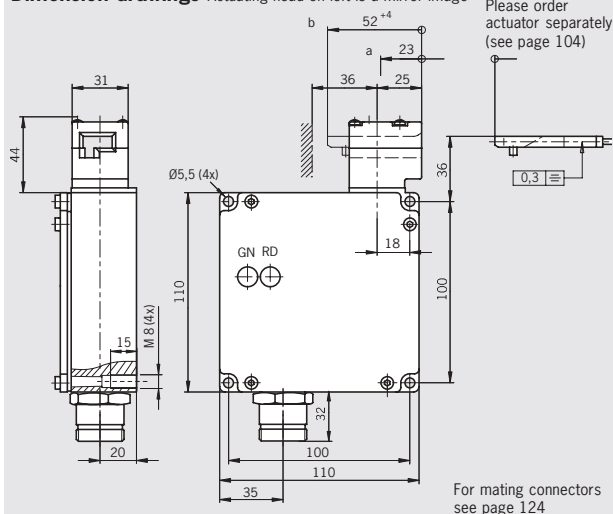
Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Red cover			Black cover	
						24 V			24 V	110 V
TZ	M20x1.5	1 Mechanical	LE Left	SK: 528H, 1 NC ⊖ + 1 NO ÜK: 528H, 1 NC ⊖ + 1 NO	Without mechanical release, with protective plate	-			083 246 TZ1LE024M-C1623	On request
				SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Without mechanical release, with protective plate	-		085 170 TZ1LE024MVB-C1623	089 466 TZ1LE110MVB-C1623	
				SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Without mechanical release	096 052 TZ1LE024MVB-RC2100				
				SK: 528H, 1 NC ⊖ + 1 NO ÜK: 528H, 1 NC ⊖ + 1 NO	Without mechanical release, with protective plate	-		083 247 TZ1RE024M-C1623		On request
			RE Right	SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Without mechanical release, with protective plate	-		085 171 TZ1RE024MVB-C1623	088 063 TZ1RE110MVB-C1623	
				SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Without mechanical release	096 051 TZ1RE024MVB-RC2100				
				SK: 528H, 1 NC ⊖ + 1 NO ÜK: 528H, 1 NC ⊖ + 1 NO	Without mechanical release, with protective plate	-				
				SK: 2131H, 3 NC ⊖ + 1 NO ÜK: 3131H, 2 NC ⊖ + 2 NO	Without mechanical release	-				

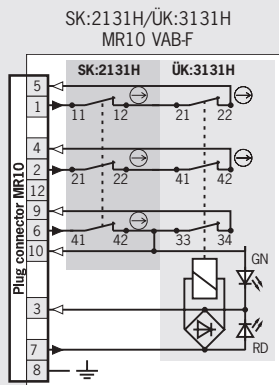
9-pin + PE

11-pin + PE

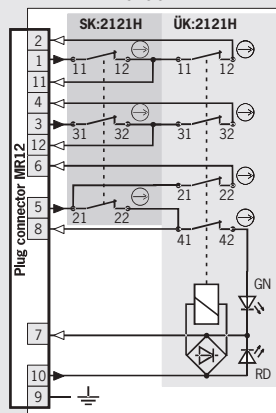
Dimension drawings Actuating head on left is a mirror image



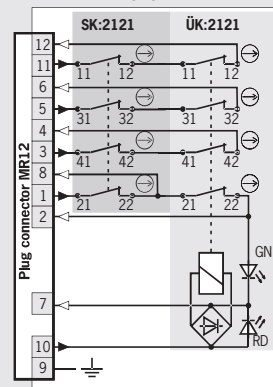
Wiring diagrams *Actuator inserted and locked*



SK:2121H/ÜK:2121H
C1902



SK:2121H/ÜK:2121H
RC1971



Ordering table

Series	Connection	Guard locking	Switch head	Switching element	Version	Red cover
						24 V
TZ	MR10 Plug connector	1 Mechanical	LE Left	SK: 2131H , 3 NC ⊖ ÜK: 3131H , 2 NC ⊖ + 1 NO	Without mechanical release	095 904 ¹⁾ TZ1LE024MVAB-F
			RE Right	SK: 2131H , 3 NC ⊖ ÜK: 3131H , 2 NC ⊖ + 1 NO	Without mechanical release	095 905 ¹⁾ TZ1RE024MVAB-F
	MR12 Plug connector	Mechanical	LE Left	SK: 2121H , 4 NC ⊖ ÜK: 2121H , 4 NC ⊖	Without mechanical release, with protective plate	079 692 TZ1LE024BHA-C1902
					C1971 Alternative wiring, without mechanical release, with protective plate	085 569 TZ1LE024BHAVFG-RC1971
			RE Right	SK: 2121H , 4 NC ⊖ ÜK: 2121H , 4 NC ⊖	Without mechanical release, with protective plate	079 693 TZ1RE024BHA-C1902
					C1971 Alternative wiring, without mechanical release, with protective plate	085 570 TZ1RE024BHAVFG-RC1971

1) No BG approval

Safety switch TZ with guard locking and guard lock monitoring



- ▶ Without mechanical release
- ▶ Two LEDs, red and green
- ▶ Plug connector for switch connection
- ▶ Plug connector for enabling switch
- ▶ Actuating head fitted left or right



Solenoid operating voltage and LED function display

The following voltage range is available:

- ▶ 24 V AC/DC -15%, +10%

Guard locking types

TZ1 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the solenoid.

TZ2 Open-circuit current principle, guard locking by applying voltage to the solenoid. Release by spring force.

Switching elements (see also Page 13/14)

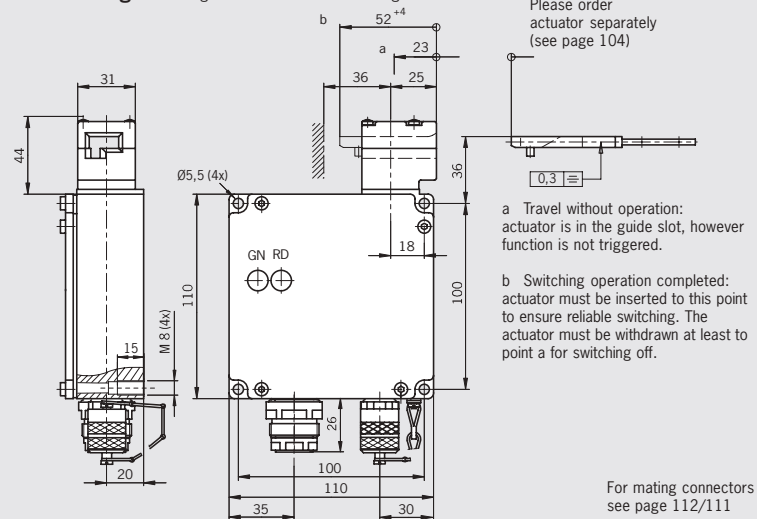
SK For monitoring the door/actuator position
ÜK For monitoring the guard locking (built-in solenoid)

For combinations available see ordering table:

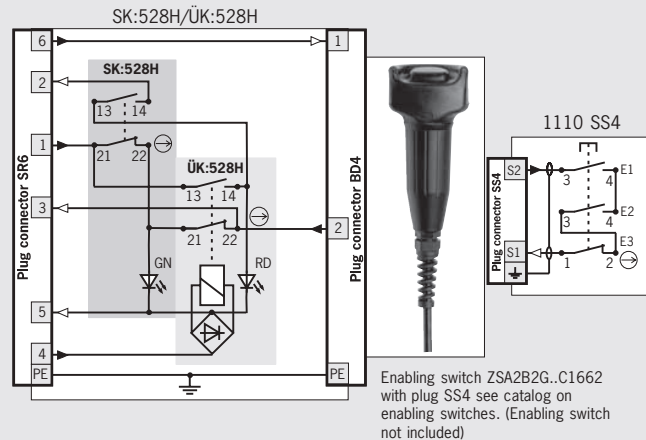
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Plug connector SR6 and BD4 (enabling switch)
6-pin + PE / 4-pin

Dimension drawings



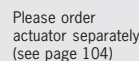
Wiring diagrams



Ordering table

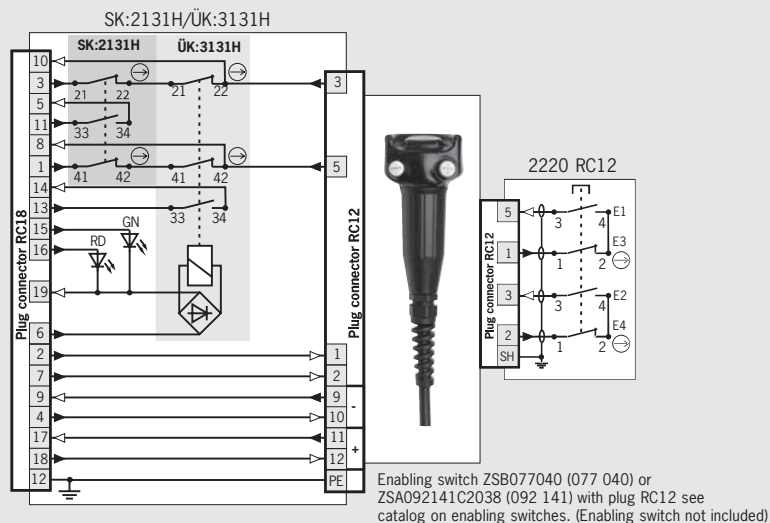
Series	Connection	Enabling switch connection	Guard locking	Switch head	Switching element	Version	Black cover 24 V
TZ	SR6 Plug connector	Enabling switch plug BD4	1 Mechanical	LE	SK: 528H, 1 NC \ominus + 1 NO	Without	070 527
				Left	ÜK: 528H, 1 NC \ominus + 1 NO	mechanical release	TZ1LE024SR6-C1662
				RE	SK: 528H, 1 NC \ominus + 1 NO	Without	054 781
				Right	ÜK: 528H, 1 NC \ominus + 1 NO	mechanical release	TZ1RE024SR6-C1662
			2 Electrical	LE	SK: 528H, 1 NC \ominus + 1 NO	Without	059 307
				Left	ÜK: 528H, 1 NC \ominus + 1 NO	mechanical release	TZ2LE024SR6-C1662
				RE	SK: 528H, 1 NC \ominus + 1 NO	Without	059 305
				Right	ÜK: 528H, 1 NC \ominus + 1 NO	mechanical release	TZ2RE024SR6-C1662

Dimension drawings Actuating head on left is a mirror image



For mating connector
with option C1825
see page 111/113

Wiring diagrams Actuator inserted and locked



Ordering table


Series	Connection	Enabling switch connection	Guard locking	Switch head	Switching element	Version	Black cover
							24 V
TZ	RC18 ¹⁾ Plug connector	Enabling switch plug RC12	1 Mechanical	LE	SK: 2131H , 3 NC ⊖ + 1 NO	Without	091 062
				Left	ÜK: 3131H , 2 NC ⊖ + 2 NO	mechanical release	TZ1LE024RC18VAB-C1803
			2 Electrical	RE	SK: 2131H , 3 NC ⊖ + 1 NO	Without	091 063
				Right	ÜK: 3131H , 2 NC ⊖ + 2 NO	mechanical release	TZ1RE024RC18VAB-C1803
				Left	SK: 2131H , 3 NC ⊖ + 1 NO	Without	075 955
				Left	ÜK: 3131H , 2 NC ⊖ + 2 NO	mechanical release	TZ2LE024RC18VAB-C1803
Right	SK: 2131H , 3 NC ⊖ + 1 NO	Without	077 149				
	Right	ÜK: 3131H , 2 NC ⊖ + 2 NO	mechanical release	TZ2RE024RC18VAB-C1803			


1) **Important:** use suitable mating connector with option C1825!


Safety switch TZ with guard locking and guard lock monitoring





The technical data on switches, switching elements and guard locking apply to all connections. Further technical data are given for the connection selected.

Switch				
				
Parameter	Value			Unit
Housing material	Anodized die-cast alloy			
Mechanical life	2 x 10 ⁶ operating cycles			
Ambient temperature	- 25 ... + 80			°C
Weight	Approx. 1.2			kg
Max. approach speed	20			m/min
Actuating force	35			N
Extraction force	30			N
Retention force	10			N
Locking force, max.	2000			N
Locking force F _{zh} in accordance with test principles GS-ET-19	1500			N

Switching element				
				
Parameter	Value			Unit
Switching principle	Slow-action switching element			
Switching elements with 2 switching elements	SK: 528H / ÜK: 528H 1 NC + 1 NO / 1 NC +1 NO			
Switching elements with 4 switching elements	SK: 2131H / ÜK: 3131H 3 NC + 1 NO / 2 NC +2 NO	SK: 2121H / ÜK: 2121H 4 NC / NC		
Switching current, min., at 24 V	1			mA
Rated impulse withstand voltage U _{imp}	2.5			kV
Contact material	Silver alloy, gold flashed			

Guard locking				
				
Parameter	Value			Unit
Solenoid operating voltage	AC/DC 24 V +10/-15%	AC 110 V +10/-15%	AC 230 V +10/-15%	
Duty cycle ED	100			%
Power consumption	7			W

Connection, cable entry M20 x 1.5				
				
Parameter	Value			Unit
Connection	Screw terminal			
Version	M20 x 1.5			
Conductor cross-section max.	per wire 1.5 mm ²			
Degree of protection acc. to IEC 60529	IP 67	IP 65: With escape release TZ...C1815, TZ...C1828 With emergency release TZ...C1816, TZ...C1823		
Rated insulation voltage U _i	250			V AC/DC
Conventional thermal current I _{th}	4			A
Short circuit protection according to IEC 60269-1 (control circuit fuse)	4			A gG
Utilization category to IEC 60947-5-1	AC15	I _e 4 A U _e 230 V		
	DC13	I _e 4 A U _e 24 V		

Connection, plug connector RC18				
				
Parameter	Value			Unit
Connection	Plug connector			
Version	RC18 (18-pin + PE)			
Degree of protection according to IEC 60529	IP 65 ¹⁾			
Rated insulation voltage U _i	110			V AC/DC
Conventional thermal current I _{th}	4			A
Short circuit protection according to IEC 60269-1 (control circuit fuse)	4			A gG
Utilization category to IEC 60947-5-1	AC15	I _e 4 A U _e 110 V		
	DC13	I _e 4 A U _e 24 V		

1) Screwed tight with the related plug connector (see page 113)

Connection, plug connector SR6



Parameter		Value	Unit
Connection		Plug connector	
Version		SR6 (6-pin + PE)	
Degree of protection according to IEC 60529		IP 65 ¹⁾	
Rated insulation voltage U_i		250	V AC/DC
Conventional thermal current I_{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC15	I_e 4 A U_e 230 V	
	DC13	I_e 4 A U_e 24 V	

1) Screwed tight with the related plug connector (see page 112)

Standard wiring TZ...SR6

The green LED indicates the state of the safety circuit and the red LED the state of the monitoring circuit.

Green only: Safety circuit closed

Red only: Actuator unlocked, safety circuit open

LED		Actuator		Safety circuit	
Red	Green	Locked	Unlocked	Closed	Open
ON	ON		X	X	
ON	OFF		X		X
OFF	ON	X		X	
OFF	OFF	Not defined or no power			

The exact states of the safety circuit and the actuator can be seen in the adjacent table for the safety switch TZ...SR6.

Connection, plug connector SR11



Parameter		Value	Unit
Connection		Plug connector	
Version		SR11 (11-pin + PE)	
Degree of protection according to IEC 60529		IP 65 ¹⁾	
Rated insulation voltage U_i		50	V AC/DC
Conventional thermal current I_{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC15	I_e 4 A U_e 50 V	
	DC13	I_e 4 A U_e 24 V	

Connection, plug connector MR8



Parameter		Value	Unit
Connection		Plug connector	
Version		MR8 (7-pin + PE)	
Degree of protection according to IEC 60529		IP 65 ¹⁾	
Rated insulation voltage U_i		250	V AC/DC
Conventional thermal current I_{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC15	I_e 4 A U_e 230 V	
	DC13	I_e 4 A U_e 24 V	

Connection, plug connector MR10



Parameter		Value	Unit
Connection		Plug connector	
Version		MR10 (9-pin + PE)	
Degree of protection according to IEC 60529		IP 65 ¹⁾	
Rated insulation voltage U_i		250	V AC/DC
Conventional thermal current I_{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC15	I_e 4 A U_e 230 V	
	DC13	I_e 4 A U_e 24 V	

Connection, plug connector MR12



Parameter		Value	Unit
Connection		Plug connector	
Version		MR12 (11-pin + PE)	
Degree of protection according to IEC 60529		IP 65 ¹⁾	
Rated insulation voltage U_i		230	V AC/DC
Conventional thermal current I_{th}		4	A
Short circuit protection according to IEC 60269-1 (control circuit fuse)		4	A gG
Utilization category to IEC 60947-5-1	AC15	I_e 4 A U_e 60 V	
	DC13	I_e 4 A U_e 24 V	

Switching functions TZ

